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ABSTRACT

This essay identifies and reviews the major and easily recognizable characteristics of a library discourse and proposes models describing the actual, possible, and necessary modes of library communication. The transmittal of orderly thoughts or information in a library situation differs from a conventional communication pattern. Three unique phases can be distinguished in the library's communication, roughly corresponding to the traditional classification of logical propositions and their basic assertions: (1) the procedural or actual; (2) the contextual or possible; and (3) the conceptual or necessary conditions of any library discourse. The resulting three-fold modality of a library discourse interrelates the physical and objective reality of the message communicated through its carrier, with the conceptual and subjective reality as it is perceived by the recipient of that message. (Author/CWM)

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ON THE MODALITY OF DISCOURSE IN THE THEORY OF LIBRARIANSHIP

BY

JOSEPH Z. NITECKI

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Abstract

It is suggested that the transmittal of orderly thoughts or information in a library situation differs from a conventional communication pattern. The major and easily recognizable characteristics of a library discourse are briefly reviewed, and models describing the actual, possible and necessary modes of library communication are proposed. The resulting three-fold modality of a library discourse interrelates the physical and objective reality of the message communicated through its carrier, with the conceptual and subjective reality as it is perceived by the recipient of that message.

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On the Modality of Discourse in the Theory of Librarianship

A Framework

Communication in librarianship is defined in this paper as a link between the idea expressed in a recorded message and its recipient. "A library is a coupling system bringing the author's work before the eye of the reader, or acting as a link between one research worker and another."[1] The discourse itself is characterized by at least four unique features.

(1) It is always initiated by a recipient of a message, and its duration is determined by the recipient's degree of receptiveness to the carriers of information.

A book is a passive participant in a library dialogue; it cannot start or terminate the dialogue, nor can it regulate the amount of information that can be communicated to its reader. The book can, however, be more or less attractive by its format, style and subject of its content.

It is the recipient of a message who creates his relations to that message and not vice versa. "One does not 'get' a message, he creates it."[2]

(2) The library communication is an act, influenced not only by the content of the carriers of messages and their recipients' degree of receptiveness, but also by the contemporaneousness of the dialogue, its existence now, and not when the message was originally formulated or printed.

The library discourse involves a number of specific conditions, such as the degree of intellectual curiosity and psychological mood of the reader, the conductiveness of the reading environment to a meaningful communication, or the impact of events preceding the act of reading. The dialogue depends on a degree of synchronization between the reader of the book and the message formulated by its author at any given instance of communication.[3]

(3) The meaning of the message, emerging from a library dialogue is metaphorical. It is a product of both the original concept, expressed in a recorded message, and the recipient's own interpretation of that message.[4]

The book can be read many times by the same reader, each time revealing different meaning. Similarly, the same book read by two different people will most probably be interpreted differently by each person. Communicated meaning cannot ever be repeated exactly.[5]

(4) The dialogue is one-directional, from the concept (CO), as formulated by its creator, and communicated through the message (ME), to its recipient (R).

Fig. 1 - One-directionality of library discourse.

So, although started by the library patron at the time of noticing the book, the discourse begins with the message and is sustained by the reader. The reverse direction, the reading into the message, is not a

dialogue, but a form of a soliloquy.

An individual book in a library collection, like any object of art, must first be identified by the library user for its potential value to him. It is a user of the collection, who does not only select a particular book in a collection, but who is also willing to receive its message. The dialogue between the book and its reader in the objective sense, requires the reader to "tune" his thinking to that of the author of the message.[6] Yet, in part, it is also a subjective communication, imposing the reader's own perception on the meaning embodied in the message; the result is a communication of some meaning new to the reader, a kind of a metaphorical discovery. This is a unique situation, in which a library user not only has to be motivated by some subjective, intellectual need to satisfy his own desires, but who also has to have enough objectivity in order to be able to modify his perceptions by newly learned facts or ideas.

The ultimate objective of any theory in library science is to provide a framework for a mediation between a given, physical CO-ME-R relationship, and a conceptual response to it. Thus, the subject matter of any philosophy of librarianship must include a study of relations between two kinds of reality: (1) a physical reality of a given, empirically determined state of knowledge which constitutes the actual content of a library collection, and (2) a conceptual reality of the mental state of the library user, which is psychologically related to that individual's responses to information. The physical reality is defined in terms of a type of CO-ME-R relationship, and it depends on such factors as the

scope and depth of the library collection. The conceptual reality is a mental creation of a library user, who assembles the perceived messages into an organized, synthetic totality of his own knowledge. Thus, the usefulness of any library collection is determined by the level of apprehension of the meaning contained in the collection by its users.[7]

These two realities are interrelated by isomorphism, a law of organization, which describes a structural correspondence between any given empirical, physical collection of data (or messages) and their conceptual mental perception.[8]

Isomorphism determines the relationship between the corresponding elements of each reality; it is based on the assumption that each reality is intelligible, so that it can be comprehended by rational interpretation of similarities or differences between itself and the other reality. The intelligibility in turn, implies organization of parts into a whole. Gestalt theory is thus relevant to this approach in its two basic notions: (a) "what happens to a part of the whole is determined by intrinsic laws inherent in the whole,"[9] and (b) the intrinsic laws are formulated in terms of the proximity among the elements perceived as a whole.

The Gestalt formulation reinforces two conceptual laws described by me elsewhere:[10] (a) The basic law of structure, which states that library service must be based on the comprehension of the whole CO-ME-R relationship, as it is expressed in any given collection, in order to perform specific services to that library's individual users, and (b) the operational law of library service, which points out to the fact that the elements within a CO-ME-R relationship cluster in groups, and hence act in similar ways, expressing similar group qualities. Consequently, a CO-ME-R

relationship can be studied both at the theoretical and operational levels.

A Discourse

A discourse is usually conceived as an orderly communication of thoughts. In the theory of librarianship, central in such a discourse is a systematic exchange of ideas about the forms in which information contained in a library collection, is communicated. The purpose of this essay is to delineate some basic modal qualities of library discourse.

We may distinguish three unique phases in the library's communication, roughly corresponding to the traditional classification of logical propositions and their basic assertions. These are: (a) the procedural or actual, (b) the contextual or possible, and (c) the conceptual or necessary conditions of any library discourse.[11]

As already indicated, the process of library communication itself can be described in terms of its three basic components: (1) the carrier of the messages, such as a physical book, microfiche, picture or magnetic tape, containing the message, (ME); (2) the receiver of the message, that is expressed in the communication vehicle (R), such as a reader of a book, or a listener of the tape recording; and (3) the message-oriented content that is being communicated to the receiver of the message in the form of data, information, instruction or the like (CO).[12]

Fig. 2 - Three main levels of communication
in the theory of librarianship.

In the above diagram, the procedural act of communication (CO-R_1-ME) describes an actual communicative process; the contextual state (CO-R_2-ME) of any particular communication impacts on a possible interpretation of the message; while the conceptual meaning (CO-ME), is an underlying, necessary subject of any communication.

Procedural Mode of Communication in Librarianship

In the procedural phase of communication, the actual interface between the carriers of information and their interpreter, is considered in terms of the means-ends sequences, conceived as a chain of successful responses to stimuli, that are constantly reinforced by positive feedback. Diagramatically, the process can be illustrated as a spiral of regenerative means-ends relationships:

Fig. 3 - A Procedural Mode of Communication
(Means-ends relationship)

In this diagram, the first selected means (M_1) is more general, than the following means (M_2); M_2 being initiated by the satisfactory completion of means M_1, and resulting in the accomplishment of the end E_1. Consequently, the end E_2 becomes more specific than the end E_1, etc.

If the choice of a means M_1 results in achieving an objective E_1, then that objective becomes a means for the next objective, causing a response E_2M_3.... etc, until a final means M_n results in achieving the final objective E_n. The process is one-directional and self-reinforcing. A break in the sequence at any stage of communication, interrupts or even

completely destroys the communication process itself.

A simple example of the procedural level of library communication is provided in the way a subject catalog is read by a student searching for material on, let's say, semantics and librarianship. He chooses a likely subject heading (M_1) "Philosophy of Language" as his first means toward a more specific subject, not yet known to him, that would contain books on the topic searched (E_n). The subject "Philosophy of Language" turns out to be too broad, and a cross reference directs the student to a more specific subject heading, "Language-Philosophy" (E_1), a heading again too broad. After a number of trials, the student comes across the subject heading "Communication"; this is his final step in this particular search (E_n), since the titles listed under that heading contain books on library communication and semantics that satisfy his particular need.

The procedural condition provides an interpersonal phase of library communication. It describes the available means such as, for example, books on a given subject, in the means-ends process. It is based on a semantical process of perceiving words or symbols as expressed in a message context, describing the outward characteristics of the concept, and thus becoming that concept's fixed referent. The procedural phase of communication provides the structure for interpreting the meaning of a given concept in terms of its secondary characteristics. Hence, the procedural approach emphasizes the meaning of the concept expressed in terms of a set of specific operations (such as, e.g., a reading of a book) defined, in turn, by concrete, empirically observable procedures. It is a behavioristic method, verifiable by a manifested response to a given stimulus.

The basic difficulty of the procedural approach in communication is in developing a technique which would allow for an accurate empirical description of the process, making it possible to predict a proper means-ends sequence.

The procedural level of communication in librarianship must be differentiated from the engineering interpretation of communication. To Shannon, for example, "the semantic aspects of communication are irrelevant to the engineering aspects."[13] His theory deals with the technical problems of mechanical transference of messages, whether each message is meaningful or not. But, to quote Weaver, "this does not mean that the engineering aspects are necessarily irrelevant to the semantic aspects.... information in communication theory relates not so much to what you do say, as to what you could say."[14] However, in the philosophy of librarianship, the interest in the procedural interpretation of communication focuses on studying how one perceives what one selects, and perhaps on a more empirical level, how one selects the carriers of communication in order to fulfill one's needs.

Contextual Mode of Communication in Librarianship

A contextual interpretation of the communication process stresses the concept of need-fulfillment. The process can be sketched as a progressive selection of means available to the library patrons and selected by him in order to satisfy his own needs.

Fig. 4 - Helical Representation of the Contextual Phase in Communication (The Need-fulfillment Relationship).

N - Specific need

U - User's end-objective

R - Available resources

r - a particular resource (e.g., book) consulted by the reader

i - isomorphism between the user's needs and the resource's potential to fulfill these needs.

In this process, the user (U) approaches a collection with a specific need in mind (N); he searches for the fulfillment of that need (F) by consulting the library collection (R). A selected book, or other carrier of information, (r), represents broad resources which can be utilized by the reader to satisfy his different types of needs at different stages of the library communication. A proper level of isomorphism in the discourse can be described by a formula:

$$I(N - F) = (U_n - r_n)$$

That is, at any given stage of a CO-ME-R relationship (e.g., U_x-r_x in the diagram above), the user's need is partially satisfied by the amount of information extracted by him from the consulted source. The smaller the isomorphism (i), the more fulfilling is the communication process itself.

The contextual level of library communication is dependent on a variety of variables, affecting each component of the communication se-

quence. So, for example, the concept of communication (CO) may be presented at a very simple popularized level easily understood by a casual reader, or it can be defined mathematically in a language understood only by an engineer specializing in communication. Similarly, the message (ME) can be formulated in common English or in professional jargon, each interpreted differently by a novice or an expert.

The contextual condition provides an extra-personal phase in library communication. It describes at any given phase of communication the relationship (or equivalence) between the user's needs and their fulfillment. The relationship is predetermined by the scope of the library collection. Hence, the contextual notion of communication implies a reasoned, need-fulfillment relationship. Library science is concerned not only with a simple reflex behavior involved in choosing the means, but also with the purpose that motivates the individual to select means that are adjusted to particular preconceived needs. Library science ought to be specifically concerned about the criteria used by the reader in accepting or rejecting the services provided to him by the library, thus reflecting a collection's ability to fulfill the user's needs for information. These criteria precede the procedural sequences in a communicative process and are external to it, since the reader's response to any carrier of communication will take place only if he has a purpose in interpreting these messages. In this sense, a response to a sign "x" is considered by a reader as a meaningful behavior only because it will facilitate the achievement of the goal "y".

A contextual interpretation of the communicative process stresses

the purposefulness of selected need-fulfillment sequences. Both the procedural and contextual processes resemble a trial and error method of random search for proper sequences in communication. In both cases, successful attempts are repeated in subsequent trials, while unsuccessful attempts are abandoned. Both processes are essential in the communication pattern formation. They differ conceptually in their emphases: the procedural interpretation stresses the behavioral aspects of the communication sequences, selected a priori, while the contextual approach emphasizes the overall potential structure of communication, and is dependent on the interpretation of the context of the carriers of communication. That is, contextually, the communication process is not a summation of individual need-fulfillment sequences, but a configuration of these responses within a total integrated pattern of thought-structure of any given library user at any particular time.

The problem of contextual interpretation is a lack of a satisfactory method to evaluate, and hence to predict, the effectiveness of alternative communication processes.

Conceptual Mode of Communication in Librarianship

The conceptual approach in communication emphasizes the necessary, minimal relationship between the operational, procedural (M-E) and conditional, contextual (N-F), levels of communication.

In a communicative process, the conceptual approach establishes functional relationships between related concepts, and it is expressed by a combined means-ends, needs-fulfillment interrelationship:

$\underline{M : E = N : F}$, where M - means

M-E is a procedural description of the communication process; E - ends

N-F identifies the possible impact of individual carriers of communication on the fulfillment of needs. N - needs

F - fulfillment of needs

The relationship between M:E = N:F can be described graphically as:

Fig. 5 - Conceptual Equivalence in Library Communication (M-E/N-F relationship)

A purely conceptual analysis of communication processes in librarianship attempts to relate the M-E and the N-F sequences within any transfer of information. It attempts to correlate a given method of communication with the meaning that is conveyed by the process. The goal of the library should therefore express the needs of its users; a progress toward achieving these goals is measured in terms of available means, and it is evaluated in terms of satisfactory services, expressed by the fulfillment of the reader's needs.

In our example, the conceptual level of library communication interrelates the student's research in the subject catalog i.e., a process of finding an appropriate book (M), on a subject of communication (E), with: (1) the amount of information contained in a selected book, its accuracy and style of presentation, as well as (2) the reader's own reaction to

the material read, and determined, in turn, by the reader's previous knowledge of the subject, an interest in it, and so on.

The conceptual interpretation of a communication system aims at a formulation of theoretical relationship between the acts of library users in searching for information, and the state of library collections providing the information. The approach attempts to relate the controlled, behavioristic means-ends processes with the subjective, specific choices of M-E sequences according to the need-fulfillments of an individual library user. Basic in this process of associating means with goals is the similarity between the responses and the ends; between library material consulted by the user and the information sought by him; and between the concepts which formulate the desired objectives and the actual accomplishments.

A Recapitulation

The relationship between the three levels of communication in the library discourse can be summarized as follows:

Fig. 6 - A Three-fold Modality of a Library Discourse

The end product of a discourse in library communication is a metaphorical relationship between the descriptions of some aspects of reality, recorded physically in the carriers of the message (be it ideas, facts or other conceptual messages), and the reality's perception in the mind of the library user in a form of a conceptual reality.

The discourse is satisfactory if it meets the needs of the library user, by expanding or modifying his conceptual perception of reality,

and by assimilating new concepts that are communicated to him through the carriers of messages. These carriers provide means available to a library user to meet his goals. Each goal, in turn, is determined by the user's own needs to fulfill it at any particular time.

The issues brought up in this paper relate directly to the subject matter of the philosophy of librarianship. To quote McGarry, "from man's activity in a symbolic universe of his own creation comes the concept of the library; from his urge to transcend time comes the actuality of the library."[15] In the vast human knowledge, stored in library collections, an infinite number of conceptual realities wait for their discovery. Thus, library communication is a link between past human accomplishments and their future, unlimited and unexplored potential.

Joseph Z. Nitecki

Notes and Bibliography

The background material for this paper is extensive, accumulated gradually throughout a long period of time, and hence difficult to be traced in detail for this bibliography. However, major works consulted recently are listed below.

1. McGarry, K. J. Communication, Knowledge and the Librarian. Hamden, Conn., Linnet Books, 1975, p. 23. McGarry foresees in this approach "a new kind of librarian with a new social role as 'linkman'." (p. 48)

2. Thayer, Lee O., "On Theory-building in Communication: Some Conceptual Problems." The Journal of Communication, xiii(4), (December, 1963), p. 232.

3. Thayer, Lee O., "Communication and Communication Systems;" in his Organization, Management and Interpersonal Relations. Homewood, Ill., Richard D. Irwin, 1968.

4. Nitecki, Joseph Z., "Metaphors of Librarianship: A Suggestion for a Metaphysical Model," The Journal of Library History, Philosophy and Comparative Librarianship, 14, no. 1 (Winter, 1979),

5. "That is, not only are the components of a particular human communication system never the same in other communication systems; they are never again the same in the 'same' communication system.", Lee Thayer, "Communication Systems," in: Ervin Laszlo ed., The Relevance of General Systems Theory; Papers Presented to Ludwig von Bertalanffy on His Seventieth Birthday. New York, Braziller, 1972, p. 111.

6. Thayer, Communication and Communication Systems, op.cit., p. 129, passim

7. The two realities, called by H. Curtis Wright "physics of library operations" and "metaphysics of librarianship" are the subject of his recent essays and follow-up discussions. See: H. Curtis Wright, "Of Mirrors, Monkeys, and Apostles," Journal of Library History, 13, no. 4 (Fall, 1978) :388-407.

8. Isomorphism, as used in the General Systems theory, assumes "general orderability" and it "suggests a fundamental unity of the observables." Laszlo, Ervin, Introduction to Systems Philosophy; Toward a New Paradigm of Contemporary Thought. New York, Harper Torchbooks, 1972, p. 18.

9. Max Wertheimer. Quoted in The Encyclopedia of Philosophy, Paul Edwards, editor-in-chief. New York, Macmillan, 1967, vol. 3, p. 318.

10. Nitecki, Joseph Z., "Toward a Conceptual Pattern in Librarianship," General Systems Bulletin, v. 2, no. 11 (June, 1970): 2-16. Also in ERIC, no. ED 126897, December, 1976.

11. See also four "world hypotheses" of Stephen Pepper (Formism, Mechanism, Contextualism and Organicism) in his: World Hypotheses, a Study in Evidence, Berkeley and Los Angeles, University of California Press, 1957; and "three worlds" of Karl Popper (physical, in conscious experiences and in the logical contents of books, libraries, etc.), in his: Objective Knowledge. London, Oxford University Press, 1972. Pepper's approach is fully examined in my other writings; Popper's classification is referred to in McGarry, op.cit., p. 43.

12. For the similarity between the concepts of CO-ME-R and B-U-K, see: Nitecki, Joseph Z., "Reflection on the Nature and Limits of Library Science," The Journal of Library History, Philosophy and Comparative Librarianship, v. 3, no. 2 (April, 1968) :103-119.

13. Shannon, Claude E., and Warren Weaver. The Mathematical Theory of Communication. Urbana, Ill., The University of Illinois Press, 1964, p. 8.

14. Ibid.

15. McGarry, op.cit., p. 46.

Fig.1. ONE—DIRECTIONALITY OF A LIBRARY DISCOURSE

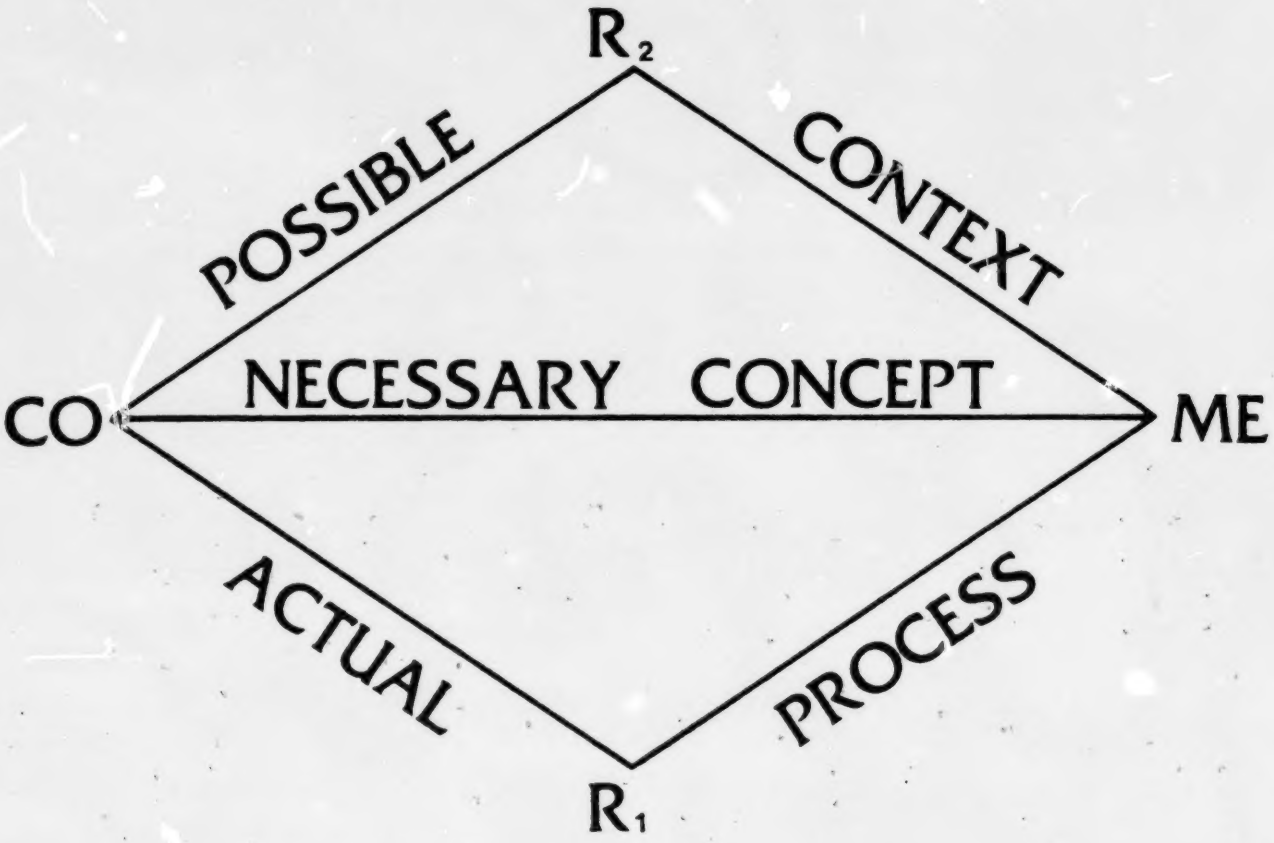

Fig. 2. THREE MAIN LEVELS OF COMMUNICATION
IN THE THEORY OF LIBRARIANSHIP

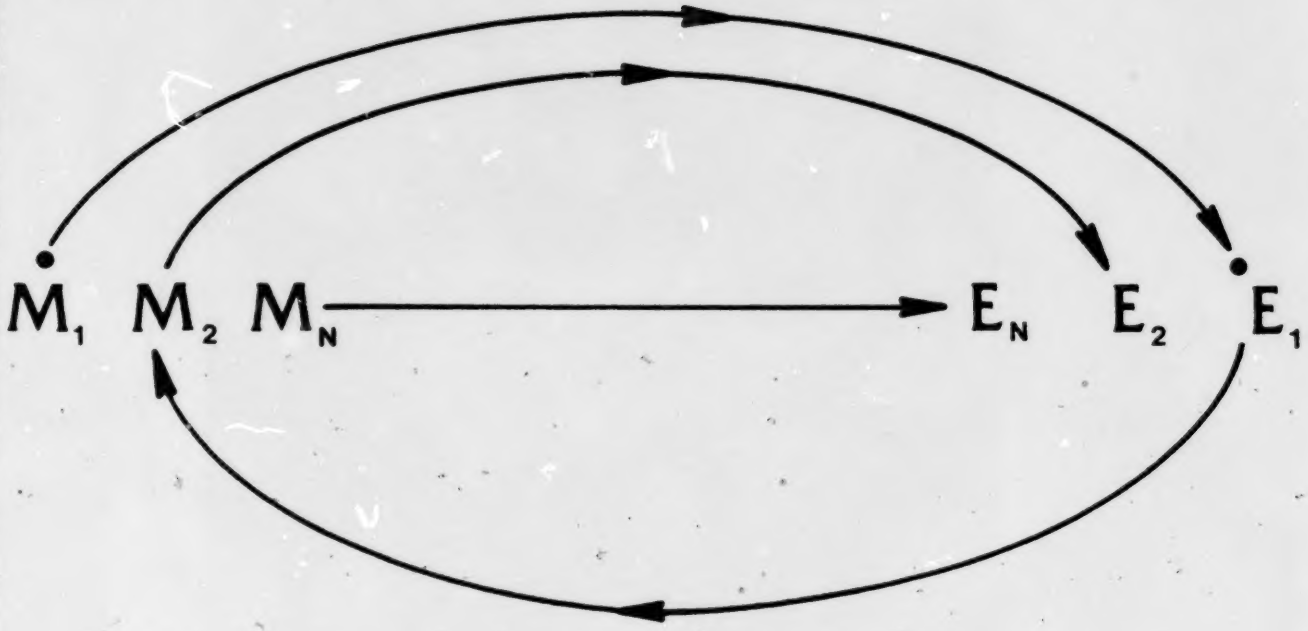

Fig. 3. A PROCEDURAL MODE OF COMMUNICATION
(MEANS—ENDS RELATIONSHIP)

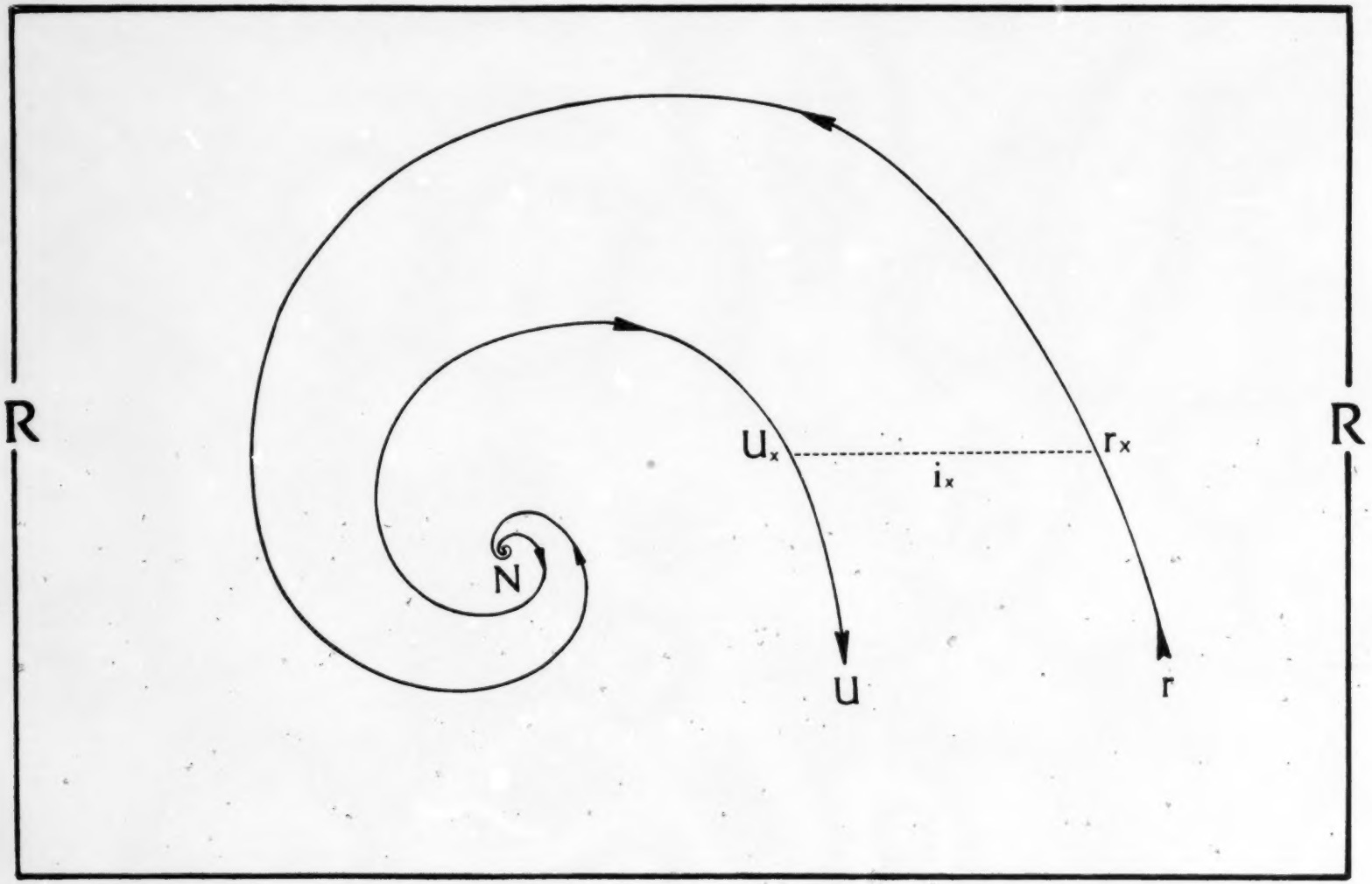

Fig. 4. HELICAL REPRESENTATION OF THE CONTEXTUAL PHASE IN COMMUNICATION (THE NEED—FULFILMENT RELATIONSHIP)

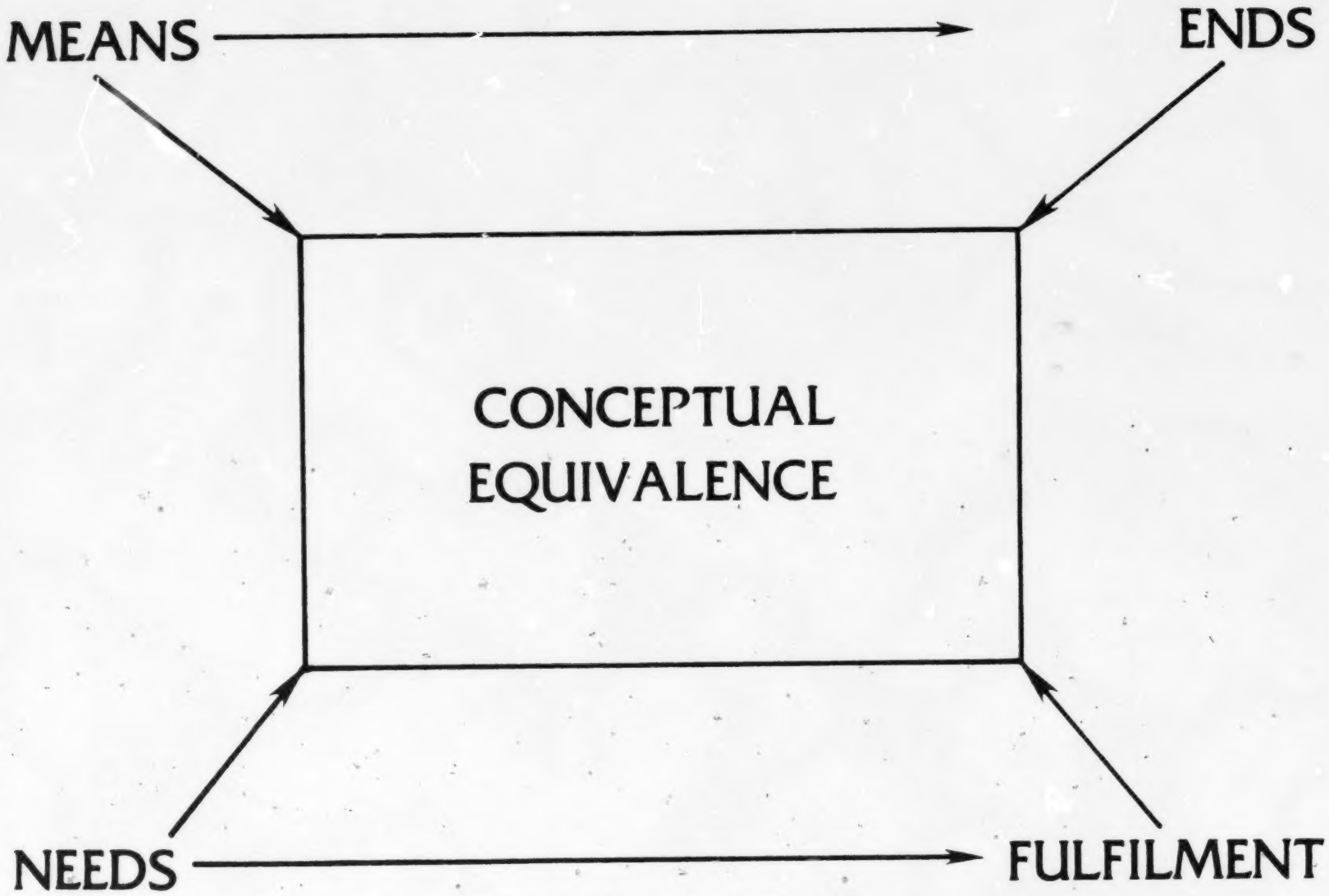

Fig. 5. CONCEPTUAL EQUIVALENCE IN LIBRARY COMMUNICATION (M/E-N/F Relationship)

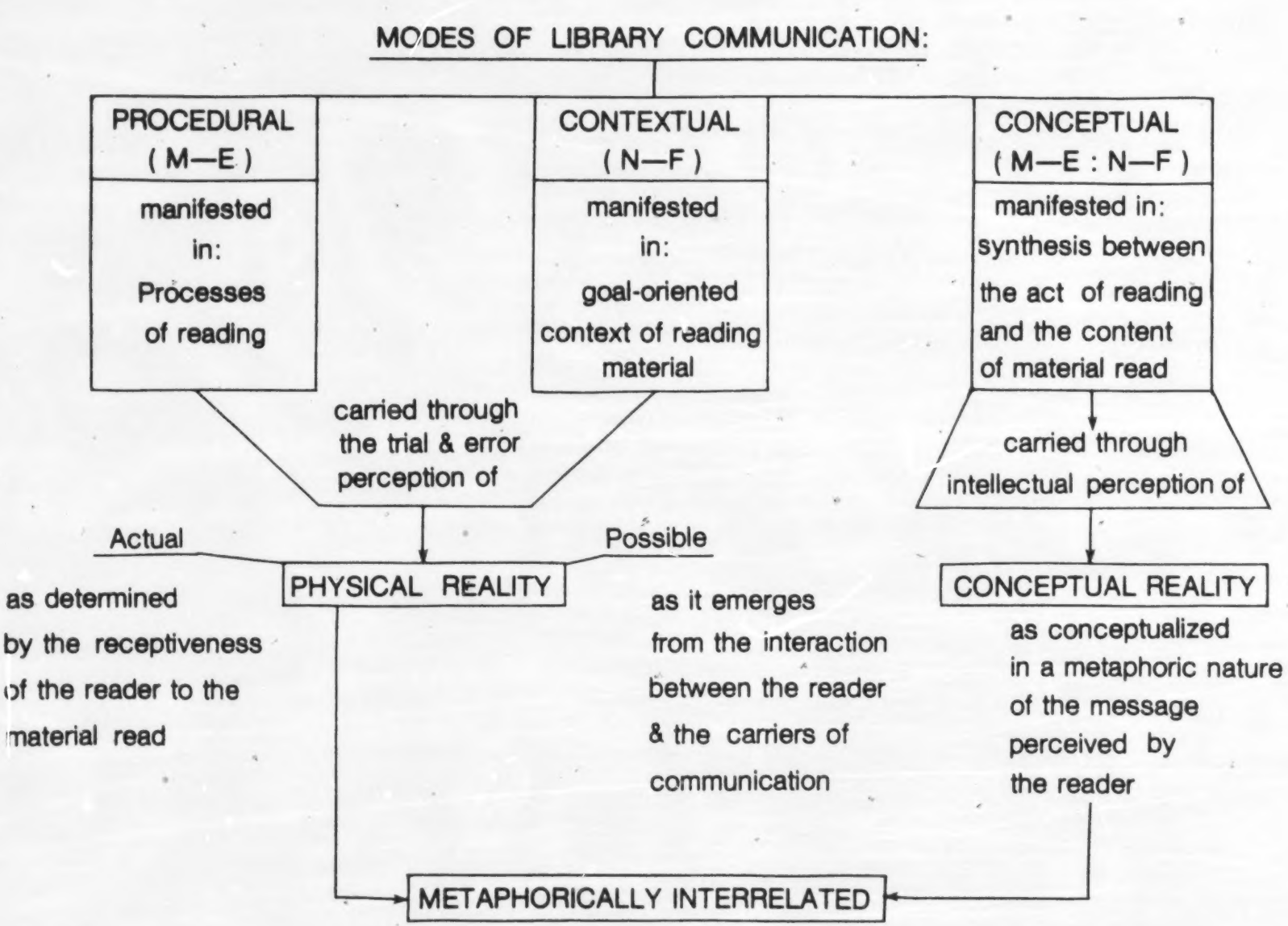
MODES OF LIBRARY COMMUNICATION:
PROCEDURAL (M—E)
manifested in: Processes of reading
CONTEXTUAL (N—F)
manifested in: goal-oriented context of reading material
CONCEPTUAL (M—E : N—F)
manifested in: synthesis between the act of reading and the content of material read
carried through the trial & error perception of
carried through intellectual perception of
Actual
Possible
PHYSICAL REALITY
CONCEPTUAL REALITY
as determined by the receptiveness of the reader to the material read
as it emerges from the interaction between the reader & the carriers of communication
as conceptualized in a metaphoric nature of the message perceived by the reader
METAPHORICALLY INTERRELATED

Fig.6. A THREE—FOLD MODALITY OF A LIBRARY DISCOURSE